APPENDIX H

DIRECT FIRE PLANNING AND CONTROL

Suppressing or destroying the enemy with direct fires is fundamental to success in close combat. Effective direct fires are the unique contribution of maneuver forces to the combined arms team, and fire and movement are complementary components of maneuver. The SBCT infantry company commander must effectively plan to focus, distribute, and shift the overwhelming mass of his direct fire capability at critical locations and times to be successful on the battlefield. These resources include dismounted infantry, ICVs, and MGS vehicles. Effective and efficient fire control means that the company acquires the enemy rapidly and masses the effects of direct fires to achieve decisive results in the close fight.

Section I. PRINCIPLES OF DIRECT FIRE CONTROL

When planning and executing direct fires, the SBCT infantry company commander and subordinate leaders must know how to apply several fundamental principles. The purpose of these direct fire control principles is not to restrict the actions of subordinates, but to help the company accomplish the primary goal of any direct fire engagement: to eliminate the enemy by acquiring first and shooting first. Applied correctly, these principles give subordinates the freedom to respond rapidly upon acquisition of the enemy. This discussion focuses on the following principles:

- Mass the effects of fire.
- Destroy the greatest threat first.
- Avoid target overkill.
- Employ the best weapon for the target.
- Minimize friendly exposure.
- Prevent fratricide.
- Plan for extreme limited visibility conditions.
- Develop contingencies for diminished capabilities.

H-1. MASS THE EFFECTS OF FIRE

The SBCT infantry company must mass its direct fires to achieve decisive results. Massing entails focusing direct fires at critical points and distributing the effects. Random application of fires is unlikely to have a decisive effect. For example, concentrating the company's fires at a single target may ensure its destruction or suppression; however, that fire control option will fail to achieve the decisive effect on the enemy formation or position.

H-2. DESTROY THE GREATEST THREAT FIRST

The order in which the SBCT infantry company engages enemy forces is in direct relation to the danger these forces present. The threat posed by the enemy depends on his weapons, range, and positioning. Presented with multiple targets, a unit must initially

concentrate direct fires to destroy the greatest threat, then distribute fires over the remainder of the enemy force.

H-3. AVOID TARGET OVERKILL

Use only the amount of fire required to achieve necessary effects. Target overkill wastes ammunition and is not tactically sound. To the other extreme, the company cannot have every weapon engage a different target because the requirement to destroy the greatest threats first remains paramount.

H-4. EMPLOY THE BEST WEAPON FOR THE TARGET

Using the appropriate weapon for the target increases the probability of rapid enemy destruction or suppression; at the same time, it conserves ammunition. The SBCT infantry company has many weapons with which to engage the enemy. Target type, range, and exposure are key factors in determining the weapon and ammunition that should be employed, as are weapons and ammunition availability and desired target effects. Additionally, a leader must consider more than only the capabilities of dismounted infantry squads and ICVs. He also must determine how to best employ his MGS platoon. The company commander arrays his forces based on the terrain, enemy, and desired effects of all of his available direct fires. As an example, when he expects an enemy dismounted assault in restricted terrain, the company commander employs his dismounted infantry squads, taking advantage of their ability to engage numerous, fast-moving dismounted targets.

H-5. MINIMIZE FRIENDLY EXPOSURE

Units increase their survivability by exposing themselves to the enemy only to the extent necessary to engage him effectively. Natural or manmade defilade provides the best cover from ATGMs and other large caliber direct fire munitions. Dismounted infantry and vehicles minimize their exposure by constantly seeking effective available cover, attempting to engage the enemy from the flank, remaining dispersed, firing from multiple positions, and limiting engagement times.

H-6. PREVENT FRATRICIDE

The company commander must be proactive in reducing the risk of fratricide and noncombatant casualties. He has numerous tools to assist him in this effort: FBCB2, identification training for combat vehicles and aircraft, the unit's weapons safety posture, the weapons control status, and recognition markings. Knowledge and employment of applicable ROE are the primary means of preventing noncombatant casualties.

H-7. PLAN FOR EXTREME LIMITED VISIBILITY CONDITIONS

At night, limited visibility fire control equipment enables the SBCT infantry company to engage enemy forces at nearly the same ranges that are applicable during the day. Obscurants such as dense fog, heavy rain, heavy smoke, and blowing sand, however, may reduce the capabilities of thermal and IR equipment. It also may add confusion to information provided by FBCB2. Therefore, the company commander should develop contingencies for such extreme limited visibility conditions. Although decreased acquisition capabilities have minimal effect on area fire, point target engagements are

likely to occur at decreased ranges. Firing positions, whether offensive or defensive, typically must be adjusted closer to the area or point where the commander intends to focus fires. Another alternative is the use of visual or IR illumination when there is insufficient ambient light for passive light intensification devices.

H-8. DEVELOP CONTINGENCIES FOR DIMINISHED CAPABILITIES

Leaders initially develop plans based on their units' maximum capabilities; they make backup plans for implementation in the event of casualties, weapon damage or failure, or loss of the COP. While leaders cannot anticipate or plan for every situation, they should develop plans for what they view as the most probable occurrences. Building redundancy into these plans, such as having two systems observe the same sector, is an invaluable asset when the situation (and the number of available systems) permits. Designating alternate sectors of fire provides a means of shifting fires if adjacent elements become unable to fire.

Section II. FIRE CONTROL PROCESS

To bring direct fires against an enemy force successfully, commanders and leaders must continuously apply the four steps of the fire control process. At the heart of this process are two critical actions: rapid, accurate target acquisition and the massing of fires to achieve decisive effects on the target. Target acquisition is the detection, identification, and location of a target in sufficient detail to permit the effective employment of weapons. Massing entails focusing fires at critical points and then distributing the fires for optimum effect. The four steps are--

- Identify probable enemy locations and determine the enemy scheme of maneuver.
- Determine where and how to mass (focus and distribute) fire effects.
- Orient forces to speed target acquisition.
- Shift fires to refocus or redistribute their effects.

H-9. IDENTIFY PROBABLE ENEMY LOCATIONS AND DETERMINE THE ENEMY SCHEME OF MANEUVER

The SBCT infantry company commander plans and executes direct fires based on his analysis of the factors of METT-TC. In particular, his analyses of the terrain and the enemy force are essential and aid him in visualizing how the enemy will attack or defend a particular piece of terrain. A defending enemy's defensive position or an attacking enemy's support position is normally driven by terrain. Typically, there are limited points on a piece of terrain that provide both good fields of fire and adequate cover for a defender. Similarly, an attacking enemy will have only a limited selection of avenues of approach that provide adequate cover and concealment. Coupled with awareness gained through FBCB2, the company commander's understanding of the effects of a specific piece of terrain on maneuver assist him in identifying probable enemy locations and likely avenues of approach both before and during the fight. Figure H-1, page H-4, illustrates the commander's analysis of enemy locations and scheme of maneuver. He may use any or all of the following products or techniques in developing and updating the analysis:

- A SITEMP provided by the battalion.
- A SPOTREP or contact report on enemy locations and activities.
- Reconnaissance of the area of operations.

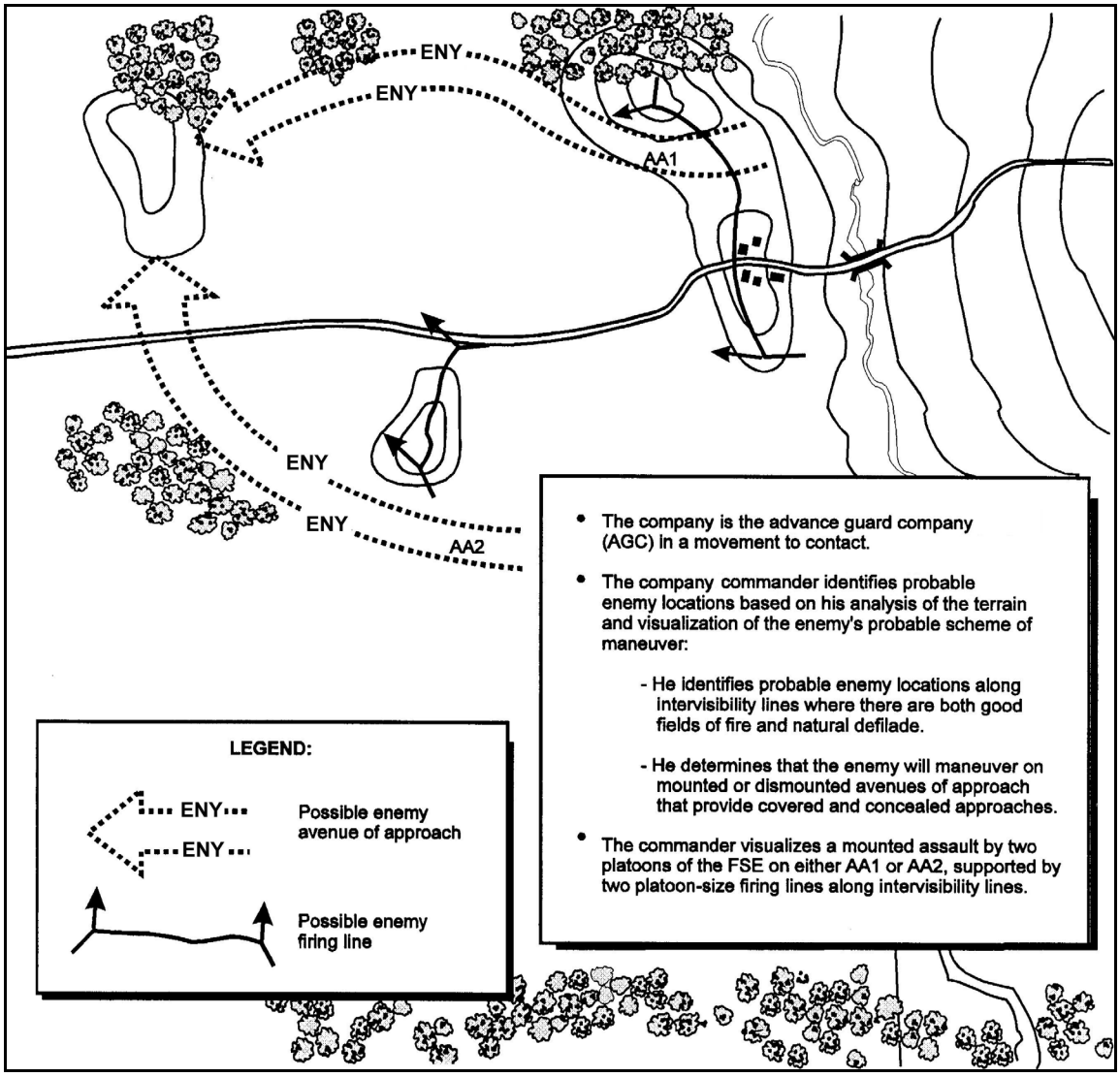

Figure H-1. Identifying probable enemy locations and determining enemy scheme of maneuver.

H-10. DETERMINE WHERE AND HOW TO MASS FIRES

To achieve decisive effects, the SBCT infantry company must mass direct fires. Effective massing requires the company commander both to focus the fires of subordinate elements and to distribute the effects of those fires. Based on his analysis and his concept of the operation, the company commander identifies points where he wants to--or must--focus the company's direct fires. Most often, he has identified these locations as probable enemy positions or points along likely enemy avenues of approach where the company can mass direct fires. Because the platoons may not initially be oriented on the point where the commander wants to mass direct fires, he may issue a fire command to focus

the fires. At the same time, the company commander must use direct fire control measures to effectively distribute the direct fires of his subordinate elements, which are now focused on the same point. Figure H-2 illustrates how the commander masses fires against the enemy.

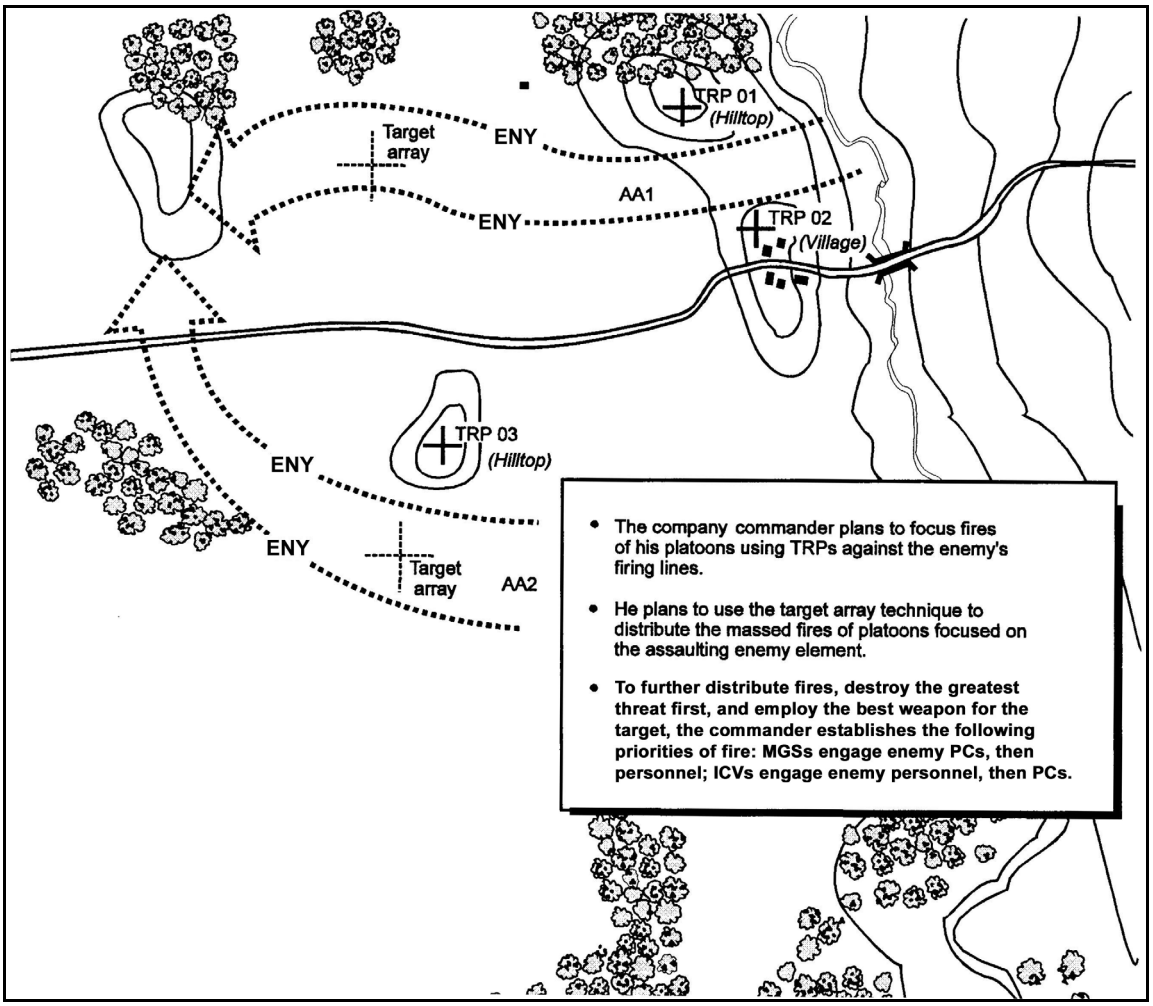

Figure H-2. Determining where and how to mass (focus and distribute) fire effects to kill the enemy.

H-11. ORIENT FORCES TO SPEED TARGET ACQUISITION

To engage the enemy with direct fires effectively, the SBCT infantry company must rapidly and accurately acquire enemy elements. Orienting the company on probable enemy locations and on likely enemy avenues of approach speeds target acquisition. Conversely, failure to orient the company results in slower acquisition, which greatly increases the likelihood that enemy forces will be able to engage first. The SBCT infantry company commander receives information that enhances his awareness primarily by FBCB2, but he has other methods to reinforce FBCB2 information. The clock direction orientation method, which is prescribed in most unit SOPs, is good for achieving all-round security, but it does not ensure that friendly forces are most effectively oriented to detect the enemy. To achieve this critical orientation, the commander typically designates TRPs on or near a probable enemy location or avenues of approach and orients his platoons using directions of fire or sectors of fire. Normally, some ICVs and MGS vehicles scan the designated direction, sector, or area while others observe alternate sectors or areas to provide all-round security. Figure H-3 illustrates how the company commander orients the company for quick, effective acquisition of the enemy force.

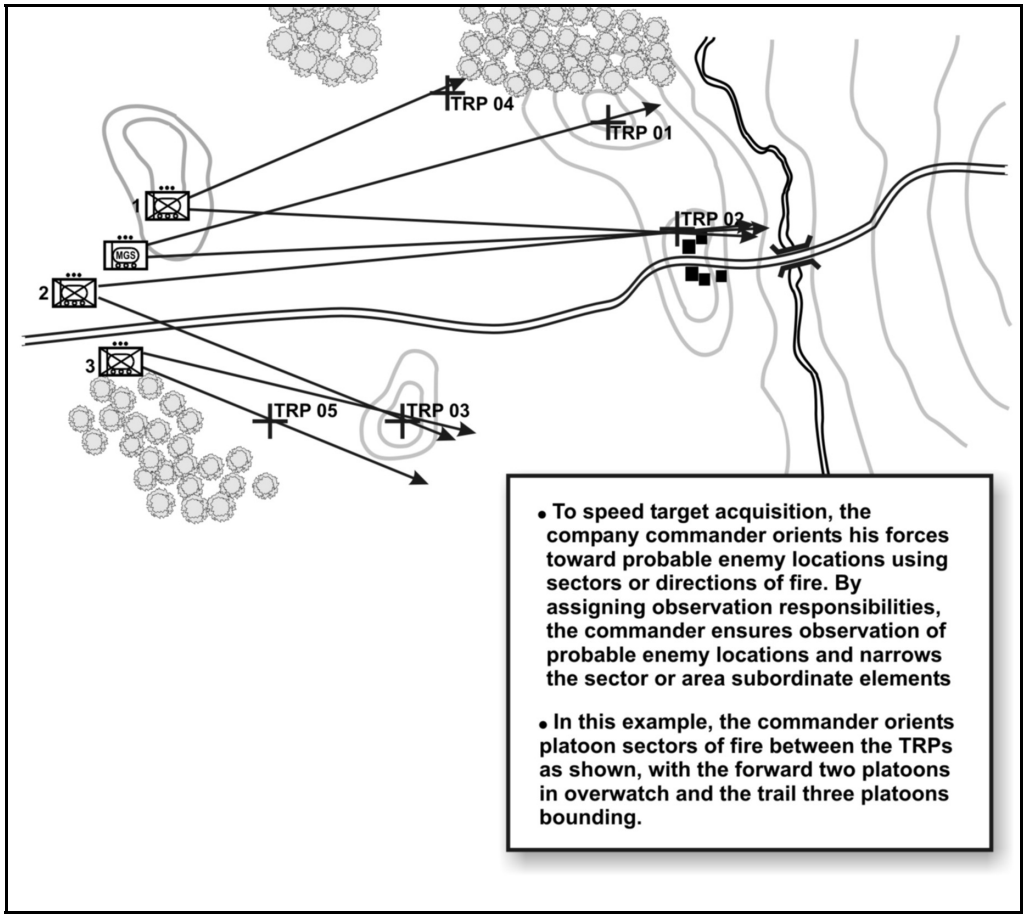

Figure H-3. Orienting forces to speed target acquisition.

H-12. SHIFT FIRES TO REFOCUS AND REDISTRIBUTE

As the engagement proceeds, leaders must shift direct fires to refocus and redistribute the effects based on evolving friendly and enemy information. Figure H-4 provides an example of shifting to refocus and redistribute fires. The SBCT infantry company commander and his subordinate leaders apply the same techniques and considerations that they used earlier to focus and distribute fires, including fire control measures. A variety of situations dictate shifting of fires, including the following:

- Appearance of an enemy force posing a greater threat than the one currently being engaged.
- Extensive destruction of the enemy force being engaged, creating the possibility of target overkill.
- Destruction of friendly elements that are engaging the enemy force.
- Change in the ammunition status of friendly elements that are engaging the enemy force.
- Maneuver of enemy or friendly forces resulting in terrain masking.
- Increased fratricide risk as a maneuvering friendly element closes with the enemy force being engaged.

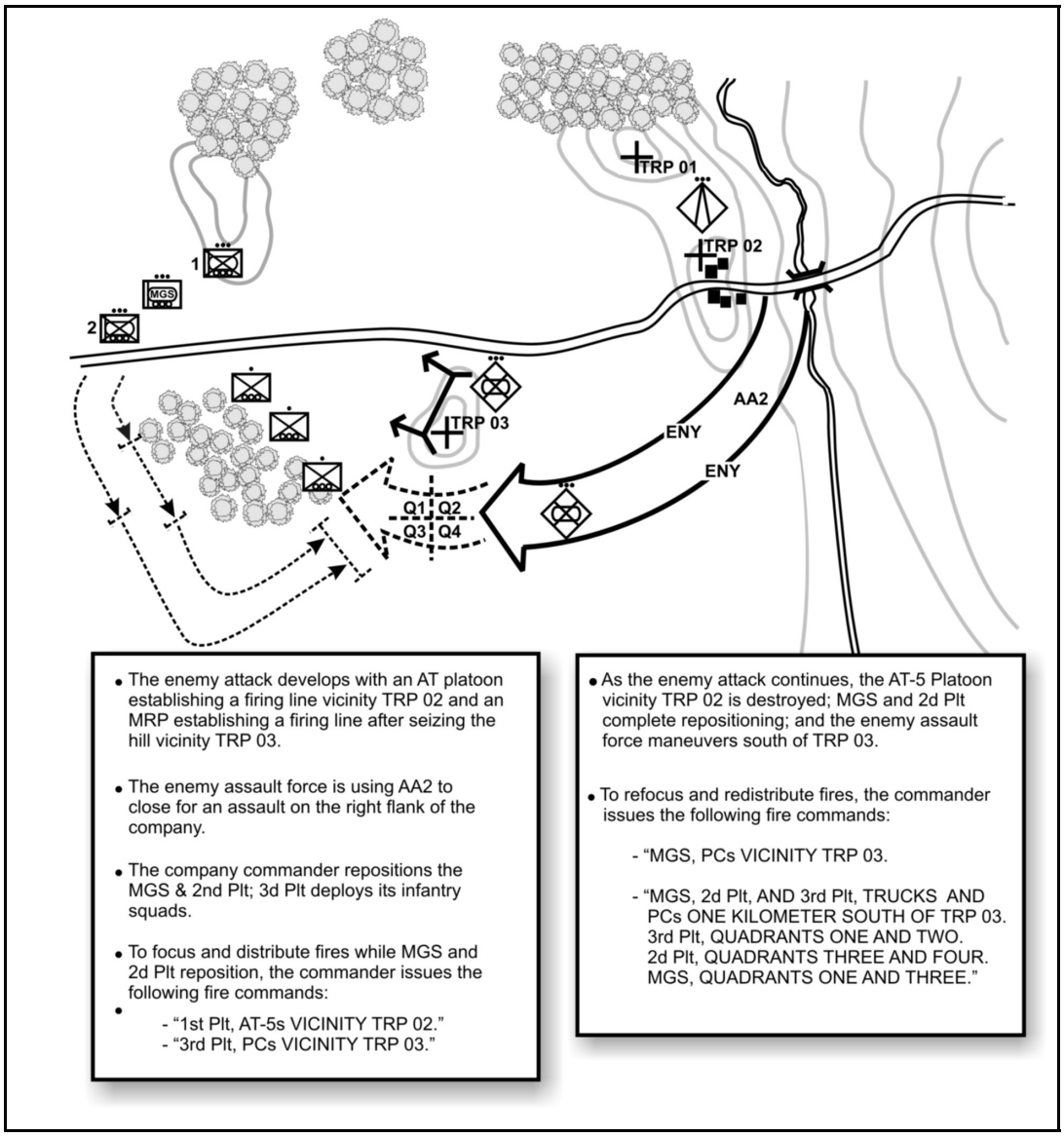

Figure H-4. Shifting to refocus and redistribute fires.

Section III. DIRECT FIRE PLANNING

The SBCT infantry company commander plans direct fires concurrent with his troop-leading procedures. Determining where and how the company can and will mass fires is an essential step as the commander develops his concept of the operation.

H-13. PLANNING DIRECT FIRES

After identifying probable (or known) enemy locations, the SBCT infantry commander determines points or areas where he will focus his combat power. His situational understanding (or visualization) of where and how the enemy will attack or defend assists him in determining the volume of fires he must focus at particular points to have a decisive effect. In addition, if he intends to mass the direct fires of more than one platoon, he must establish a means for distributing those fires effectively.

a. Based on where and how he wants to focus and distribute direct fires, the commander can establish the weapons ready postures for company elements as well as triggers for initiating fires. The company commander uses the tactical information provided by FBCB2. He must evaluate the risk of fratricide and establish controls to prevent it. Fratricide prevention measures include designation of recognition markings, weapons control status, and weapons safety posture.

b. Having determined where and how he will mass and distribute direct fires, the company commander must orient platoons so they can rapidly and accurately acquire the enemy. The commander must anticipate how the enemy will fight. He gains this anticipation through a detailed war-game of the selected course of action to determine probable requirements for refocusing and redistributing fires and to establish other necessary controls. Also during the troop-leading procedures, the company commander plans and conducts rehearsals of direct fires (and of the fire control process) based on his analysis.

c. The company commander must continue to apply planning procedures and considerations throughout execution. He must be able to adjust direct fires based on combining the latest available tactical information from FBCB2. When necessary, he must also apply effective direct fire SOPs, which are covered in the following discussion.

H-14. DIRECT FIRE SOP

A well-rehearsed direct fire SOP enhances direct fire planning and ensures quick, predictable actions by all members of the company. The SBCT infantry company commander bases the various elements of the SOP on the capabilities of his force and on anticipated conditions and situations. SOP elements should include standing means for focusing fires, distributing their effects, orienting forces, and preventing fratricide. The commander should adjust the direct fire SOP whenever changes to anticipated and actual factors of METT-TC become apparent.

a. **Focusing Fires.** FBCB2 enhances a company commander's ability to focus the direct fires of his platoons, but he also needs other means, such as TRPs, to do so. One technique is to establish a standard respective position for TRPs in relation to friendly elements and then to consistently number the TRPs, such as from left to right. This allows leaders to quickly determine and communicate the location of the TRPs.

b. **Distributing Fires.** Two useful means of distributing the effects of the company's direct fires are engagement priorities and target array. Engagement priorities, by type of enemy vehicle or weapon, are assigned for each type of friendly weapon system. The target array technique can assist in distribution by assigning specific friendly elements to engage enemy elements of approximately similar capabilities. The following are example SOP elements for distributing the fires of an SBCT infantry company moving mounted in a wedge formation:

- MGSs engage medium-armored vehicles first, then tanks.
- ICVs engage antitank weapons first, then trucks.
- Javelins engage tanks first, then other armored vehicles.
- Dismounted infantry engage crew-served weapons, then infantry.
- If the company masses fires at the same target, then the MGS platoon engages enemy armored vehicles, the left flank infantry platoon engages the left half of the enemy formation, and the right flank infantry platoon engages the right half of the enemy formation. The trail infantry platoon remains in reserve.

c. **Orienting Forces.** A standard means of orienting friendly forces is to assign a primary direction of fire, using a TRP, to orient each element on a probable (or known) enemy position or likely avenue of approach. To provide all-round security, the SOP can supplement the primary direction of fire with sectors using a friendly-based quadrant. The following example SOP elements illustrate the use of these techniques:

(1) The front (center) platoon's primary direction of fire is TRP 2 (center) until otherwise specified; the platoon is responsible for the front two quadrants.

(2) The left flank platoon's primary direction of fire is TRP 1 (left) until otherwise specified; the platoon is responsible for the left two friendly quadrants (overlapping with the center platoon).

(3) The right flank platoon's primary direction of fire is TRP 3 (right) until otherwise specified; the platoon is responsible for the right two friendly quadrants (overlapping with the center platoon).

(4) The trail platoon's primary direction of fire is TRP 3 (right) until otherwise specified; the platoon is responsible for the bottom right friendly quadrant (overlapping with the right platoon).

d. **Preventing Fratricide.** FBCB2 is a good tool for minimizing fratricide risk but does not supplant the company commander's responsibility to plan for fratricide prevention. The SOP must address the most critical requirement of fratricide prevention with or without FBCB2. It must direct subordinate leaders to inform the commander, adjacent elements, and subordinates whenever a friendly force is moving or preparing to move. One technique is to establish a standing weapons control status of WEAPONS TIGHT, which requires positive enemy identification prior to engagement. The SOP must also cover means for identifying dismounted infantry squads and other friendly dismounted elements. Techniques include using arm bands, medical heat pads, or an IR light source, as well as detonating a smoke grenade of a designated color at the appropriate time.

Section IV. DIRECT FIRE CONTROL

Acquiring the enemy is a precursor to direct fire engagement. The company commander must not assume that his unit will always be able to see the enemy through FBCB2. He must expect the enemy to use cover and concealed routes effectively when attacking and to make best use of flanking and concealed positions in the defense. As a result, the company may not have the luxury of a fully exposed enemy that it can easily see. The acquisition of the enemy often depends on visual recognition of very subtle indicators, such as exposed antennas, reflections from the vision blocks of enemy vehicles, small dust clouds, or smoke from vehicle engines or ATGM or tank fires. Because of the difficulty of target acquisition, the company commander must develop surveillance plans

to assist the company in acquiring the enemy. The information he gains can then be shared with others through FBCB2.

H-15. FIRE CONTROL MEASURES

Fire control measures are the means by which the SBCT infantry company commander or his subordinate leaders control direct fires. Application of these concepts, procedures, and techniques assists the unit in acquiring the enemy, focusing fires on him, distributing the effects of the fires, and preventing fratricide. At the same time, no single measure is sufficient to control fires effectively. At company level, fire control measures are effective only if the entire unit has a common understanding of what they mean and how to employ them. Table H-1 lists terrain-based and threat-based fire control measures.

Terrain-Based Fire Control Measures	Threat-Based Fire Control Measures
Target reference point	Fire patterns
Engagement area	Target array
Sector of fire	Engagement priorities
Direction of fire	Weapons ready posture
Terrain-based quadrant	Engagement criteria
Friendly-based quadrant	Weapons control status
Maximum engagement line	Rules of engagement
Restrictive fire line	Weapons safety posture
Final protective line	Engagement techniques

Table H-1. Common fire control measures.

a. **Terrain-Based Fire Control Measures.** The SBCT infantry company commander uses terrain-based fire control measures to focus and control fires on a particular point, line, or area rather than on a specific enemy element. The following paragraphs describe the techniques associated with this type of control measure.

(1) ***Target Reference Point.*** A target reference point is an easily recognizable point on the ground that leaders use to orient friendly forces and to focus and control direct fires. In addition, when TRPs are designated as indirect fire targets, they can be used in calling for and adjusting indirect fires. Leaders designate TRPs at probable (or known) enemy locations and along likely avenues of approach. TRPs can be natural or manmade and can be established sites, such as hills or buildings, or impromptu features designated as TRPs on the spot, like burning enemy vehicles or smoke generated by an artillery round. Ideally, TRPs should be visible in three observation modes (unaided, passive-IR, and thermal) so all forces can identify them. Example of TRPs include the following features and objects:

- Prominent hill mass.
- Distinctive building.
- Observable enemy position.
- Destroyed vehicle.
- Ground-burst illumination.
- Smoke round.
- Laser point.

(2) ***Engagement Area.*** This fire control measure is an area along an enemy avenue of approach where the company commander intends to mass the direct fires of available

weapons to destroy an enemy force. The size and shape of the EA is determined by the degree of relatively unobstructed intervisibility available to the unit's weapons systems in their firing positions and by the maximum range of those weapons. Typically, company commanders delineate responsibility within the EA by assigning each platoon a sector of fire or direction of fire.

(3) ***Sector of Fire.*** A sector of fire is a defined area that must be covered by direct fire. Leaders assign sectors of fire to subordinate elements, crew-served weapons, and individual soldiers to ensure coverage of an area of responsibility. They may also limit the sector of fire of an element or weapon to prevent accidental engagement of an adjacent unit. In assigning sectors of fire, commanders and subordinate leaders consider the number and types of weapons available. They also consider acquisition system type and field of view in determining the width of a sector of fire. For example, while unaided vision has a wide field of view, its ability to detect and identify targets at distant ranges and in limited visibility conditions is restricted. Conversely, most fire control acquisition systems have greater detection and identification ranges than the unaided eye, but their field of view is narrow. Means of designating sectors of fire include the following:

- TRPs.
- Clock direction.
- Terrain-based quadrants.
- Friendly-based quadrants.

(4) ***Direction of Fire.*** A direction of fire is an orientation or point used to assign responsibility for a particular area on the battlefield that must be covered by direct fire. Leaders designate directions of fire for the purpose of acquisition or engagement by subordinate elements, crew-served weapons, or individual soldiers. Direction of fire is most commonly employed when assigning sectors of fire would be difficult or impossible because of limited time or insufficient reference points. Means of designating a direction of fire include the following:

- Closest TRP.
- Clock direction.
- Cardinal direction.
- Tracer on target.
- IR laser pointer.

(5) ***Quadrants.*** Quadrants are subdivisions of an area created by superimposing imaginary perpendicular axes over the terrain to create four separate areas, or quadrants. Quadrants can be based on the terrain, on friendly forces, or on the enemy formation. The technique in which quadrants are based on the enemy formation is usually referred to as the target array and is covered in threat-based fire control measures (paragraph H-15b). The method of identifying quadrants is established in the unit SOP, but the unit must take care to avoid confusion when using quadrants based on terrain, friendly forces, and enemy formations simultaneously.

(a) *Terrain-Based Quadrant*. A terrain-based quadrant entails use of a TRP, either existing or constructed, to designate the center point of the axes that divide the area into four quadrants. This technique can be employed in both offensive and defensive operations. In the offense, the company commander designates the center of the quadrant using an existing feature or by creating a reference point (for example, using a ground burst illumination round, a smoke marking round, or a fire ignited by incendiary or tracer

rounds). The axes delineating the quadrants run parallel and perpendicular to the direction of movement. In the defense, the company commander designates the center of the quadrant using an existing or constructed TRP. In Figure H-5, the quadrants are marked using the letter "Q" and a number (Q1 to Q4); quadrant numbers are in the same relative positions as on military map sheets (from Q1 as the upper left quadrant clockwise to Q4 as the lower left quadrant).

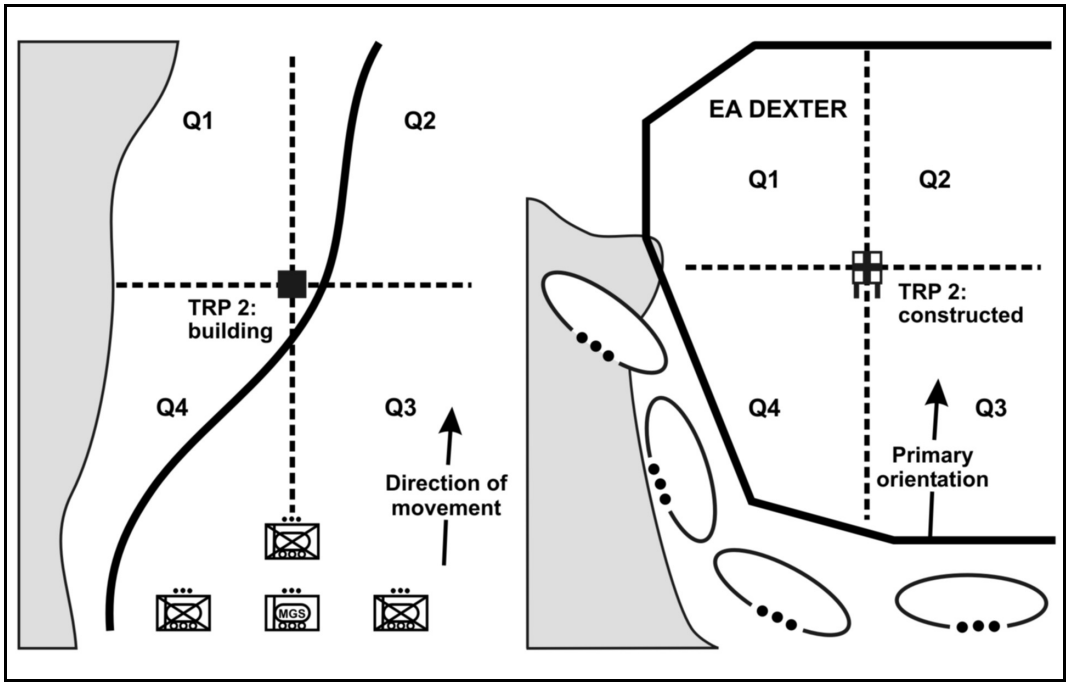

Figure H-5. Terrain-based quadrants.

(b) *Friendly-Based Quadrant*. The friendly-based quadrant technique entails superimposing quadrants over the unit's formation. The center point is based on the center of the formation, and the axes run parallel and perpendicular to the general direction of travel. For rapid orientation, the friendly quadrant technique may be better than the clock direction method because different elements of a large formation are rarely oriented in the same exact direction and because the relative dispersion of friendly forces causes parallax to the target. Figure H-6 illustrates use of friendly-based quadrants.

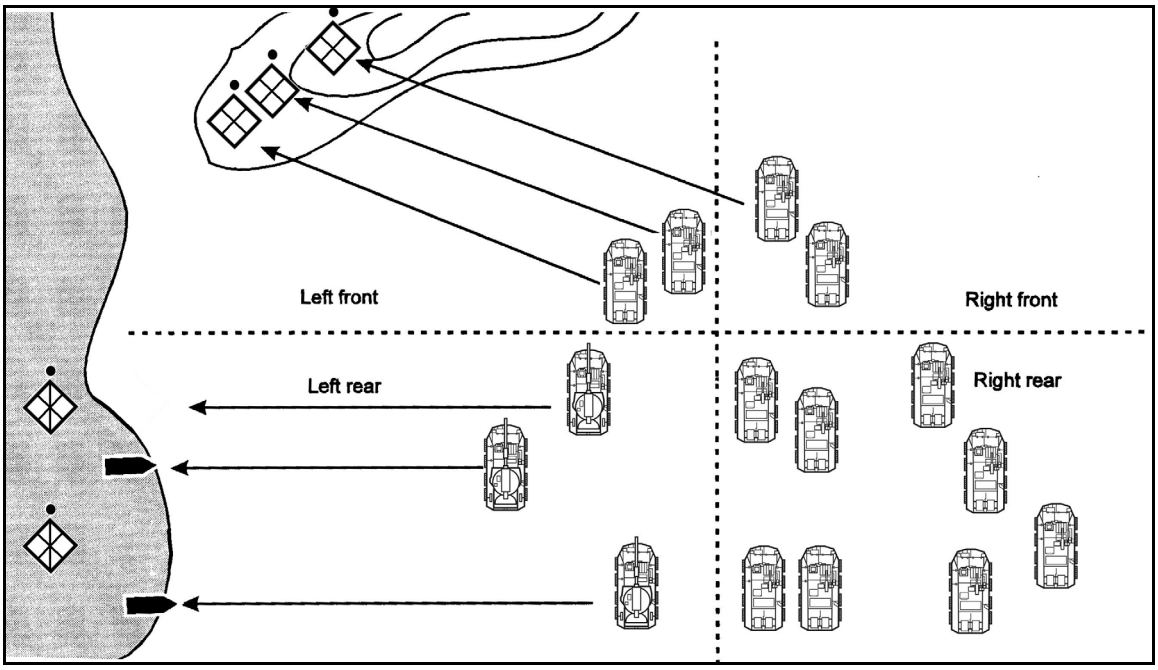

Figure H-6. Friendly-based quadrants.

(6) ***Maximum Engagement Line.*** A MEL is the linear depiction of the farthest limit of effective fire for a weapon or unit. This line is determined both by the weapon's or unit's maximum effective range and by the effects of terrain. For example, slope, vegetation, structures, and other features provide cover and concealment that may prevent the weapon from engaging out to the maximum effective range. A MEL serves several purposes. The company commander may use it to prevent vehicle crews and dismounted squads from engaging beyond the maximum effective range of their weapons, to define criteria for the establishment of triggers, and to delineate the maximum extent of battle space on the sector sketch.

(7) ***Restrictive Fire Line.*** An RFL is a line established between converging friendly forces (one or both may be moving) that prohibits fires and effects across the line without coordination with the affected force. In the offense, the company commander may designate an RFL to prevent a base of fire platoon from firing into the area where an assaulting platoon is maneuvering. This technique is particularly important when vehicles (ICV or MGS) support the maneuver of dismounted infantry squads. In the defense, the company commander may establish an RFL to prevent the unit from engaging a dismounted infantry squad positioned in restricted terrain on the flank of an enemy avenue of approach.

(8) ***Final Protective Line.*** The FPL is a line of fire established where an enemy assault is to be checked by the interlocking fires of all available weapons. The unit reinforces this line with protective obstacles and with FPFs whenever possible. Initiation of the FPF is the signal for elements, vehicle crews, and individual soldiers to shift fires to their assigned portion of the FPL.

b. **Threat-Based Fire Control Measures.** The SBCT infantry company commander uses threat-based fire control measures to focus and control direct fires by directing the unit to engage a specific enemy element rather than to fire on a point or area. The

following paragraphs describe the techniques associated with this type of fire control measure.

(1) ***Fire Patterns.*** Fire patterns are a threat-based fire control measure designed to distribute the fires of a unit simultaneously among multiple, similar targets. They are most often used by platoons to distribute fires across an enemy formation. Leaders designate and adjust fire patterns based on terrain and the anticipated enemy formation. The basic fire patterns, illustrated in Figure H-7, are the following:

- Frontal fire.
- Cross fire.
- Depth fire.

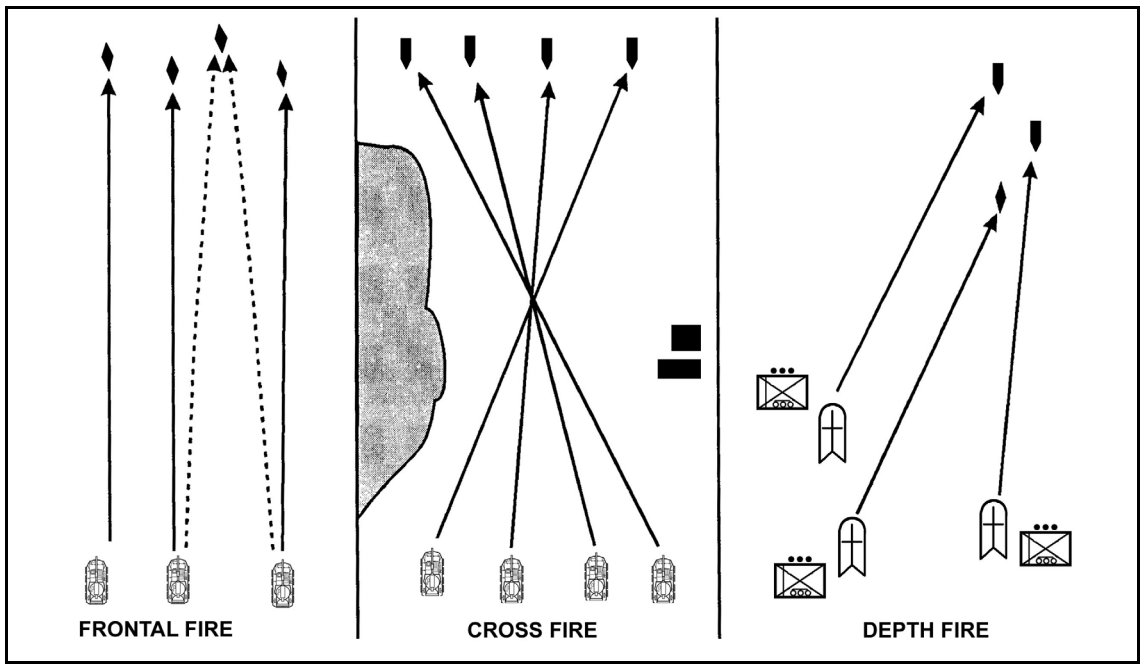

Figure H-7. Fire patterns.

(a) *Frontal Fire*. Leaders may initiate frontal fire when targets are arrayed in front of the unit in a lateral configuration. Weapons systems engage targets to their respective fronts. For example, the left flank weapon engages the left-most target, and the right flank weapon engages the right-most target. As the unit destroys targets, weapons shift fires toward the center of the enemy formation and from near to far.

(b) *Cross Fire*. Leaders initiate cross fire when targets are arrayed laterally across the unit's front in a manner that permits diagonal fires at the enemy's flank or when obstructions prevent unit weapons from firing frontally. Right flank weapons engage the

left-most targets, and left flank weapons engage the right-most targets. Firing diagonally across an engagement area provides more flank shots, thus increasing the chance of kills. It also reduces the possibility of the enemy detecting friendly elements as he continues to move forward. As the unit destroys targets, weapons shift fires toward the center of the enemy formation.

(c) *Depth Fire*. Leaders initiate depth fire when targets are dispersed in depth, perpendicular to the unit. Center weapons engage the closest targets, and flank weapons engage deeper targets. As the unit destroys targets, weapons shift fires toward the center of the enemy formation.

(2) ***Target Array.*** Target array permits the company commander to distribute fires when the enemy force is concentrated and terrain-based controls are inadequate. This threat-based distribution measure is similar to the quadrant method mentioned in terrain-based fire control measures. The company commander creates the target array by superimposing a quadrant pattern over an enemy formation. The pattern centers on the enemy formation, with the axes running parallel and perpendicular to the enemy's direction of travel. Quadrants are described using their relative locations. The examples in Figure H-8 illustrate the target array technique.

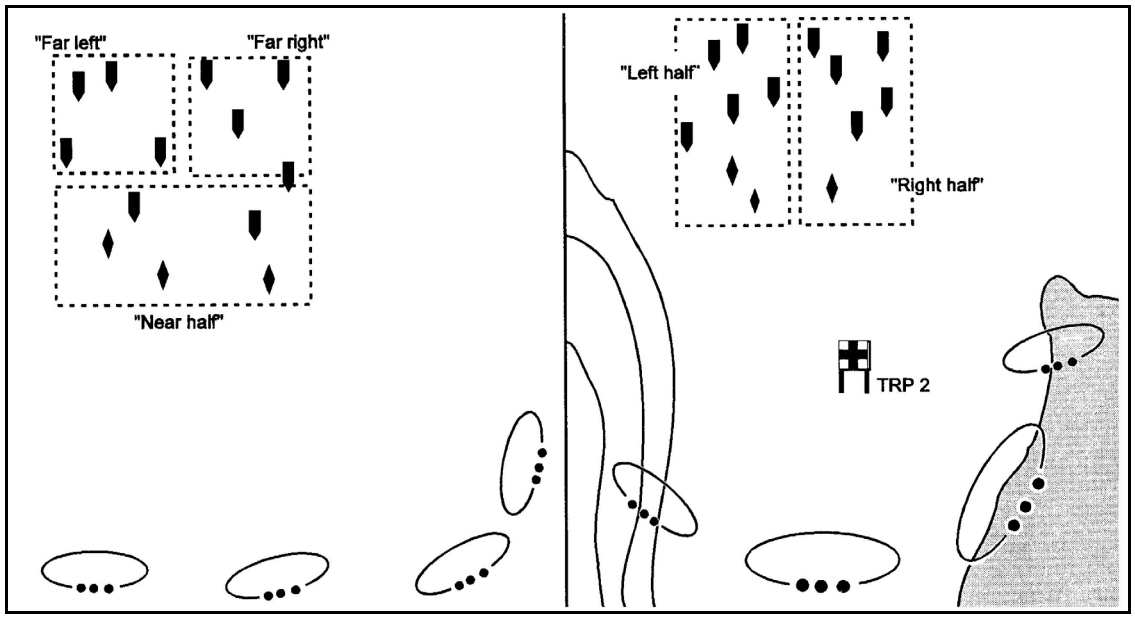

Figure H-8. Examples of target array.

(3) ***Engagement Priorities.*** Engagement priorities entail the sequential ordering of targets to be engaged. They serve one or more of the following critical fire control functions:

(a) *Prioritize Targets*. In concert with his concept of the operation, the company commander determines which target types provide the greatest threat to the company and sets these as engagement priorities. For example, he may decide that destroying enemy engineer assets is the best way to prevent the enemy from breaching an obstacle.

(b) *Employ the Best Weapons for the Target*. Establishing engagement priorities for specific friendly systems increases the effectiveness with which the unit employs its weapons. As an example, the engagement priority for the company MGS vehicles could

be enemy fortifications first, then enemy armored vehicles. This decreases the chance that the company's Javelins will need to engage enemy fortifications.

(c) *Distribute the Unit's Fires*. Establishing different priorities for similar friendly systems helps to prevent overkill and achieve effective distribution of fires. For example, the company commander may designate the enemy fortifications as the initial priority for one infantry platoon while making the enemy vehicles the priority for another infantry platoon. This decreases the chance of multiple Javelins being fired against two enemy vehicles while ignoring the dangers posed by the fortifications.

(4) ***Weapons Ready Posture.*** The weapons ready posture is a means by which leaders use the tactical information available to specify the ammunition and range for the most probable engagement. Ammunition selection depends on the target type, but the leader may adjust it based on engagement priorities, desired effects, and effective range. Range selection depends on the anticipated engagement range and is affected by terrain intervisibility, weather, and light conditions. Within the company, the weapons ready posture affects the types and quantities of ammunition loaded in ready boxes, stowed in ready racks, and carried by dismounted infantry squads.

(a) For dismounted infantry squads, weapons ready posture is the selected ammunition and indexed range for individual and crew-served weapons. For example, an M203 grenadier whose most likely engagement is to cover dead space at 200 meters from his position might load high explosive, dual purpose (HEDP) rounds and set 200 meters on his quadrant sight. To prepare for an engagement in a wooded area where engagement ranges are extremely short, an antiarmor specialist might dismount the ICV with an AT4 instead of a Javelin.

(b) For ICVs and MGSs, weapons ready posture covers the selected ammunition and the indexed range.

(5) ***Engagement Criteria.*** Engagement criteria are a specific set of conditions that specify the circumstances in which subordinate elements are to engage. This is often referred to as a trigger. The circumstances can be based on a friendly or an enemy event. For example, the engagement criteria for a friendly platoon to initiate engagement could be three or more enemy combat vehicles passing or crossing a given point or line. This line can be any natural or manmade linear feature, such as a road, ridgeline, or stream, or a line perpendicular to the unit's orientation, delineated by one or more reference points.

(6) ***Weapons Control Status.*** The three levels of weapons control status outline the conditions, based on target identification criteria, under which friendly elements may engage. The commander sets and adjusts the weapons control status based on friendly and enemy disposition. In general, a more restrictive WCS relates to a higher probability of fratricide. The three levels, in descending order of restriction, are--

- WEAPONS HOLD. Engage only if engaged or ordered to engage.
- WEAPONS TIGHT. Engage only targets positively identified as enemy.
- WEAPONS FREE. Engage any targets not positively identified as friendly.

As an example, the company commander may establish the WCS as WEAPONS HOLD when friendly forces are conducting a passage of lines. Through awareness gained by FBCB2, he may be able to lower the WCS. In such a case, the company commander may be able to set a WEAPONS FREE status when he knows there are no friendly elements in the vicinity of the engagement. This permits his elements to engage targets at extended ranges even though it is difficult to distinguish the targets accurately under battlefield

conditions. The WCS is extremely important for forces using combat identification systems: establishing the WCS as WEAPONS FREE permits leaders to engage an unknown target when they fail to get a friendly response.

(7) ***Rules of Engagement.*** ROE specify the circumstances and limitations under which forces may engage. ROE include definitions of combatant and noncombatant elements and prescribe the treatment of noncombatants. Factors influencing ROE are national command policy, the mission and commander's intent, the operational environment, and the law of war. ROE always recognize a soldier's right of self-defense; at the same time, they clearly define circumstances in which he may fire.

(8) ***Weapons Safety Posture.*** Weapons safety posture is an ammunition handling instruction that allows the company commander to precisely control the safety of his unit's weapons. Leaders supervise the weapons safety posture and soldier adherence to it, minimizing the risk of accidental discharge and fratricide. Table H-2, page H-18, outlines procedures and considerations for the company team in using the four weapons safety postures, listed in ascending order of restriction--

- AMMUNITION LOADED.
- AMMUNITION LOCKED.
- AMMUNITION PREPARED.
- WEAPONS CLEARED.

In setting and adjusting the weapons safety posture, the company commander must weigh the need to prevent accidental discharges against the requirement for immediate action based on the enemy threat. If the possibility of direct contact with the enemy is high, the company commander may establish the weapons safety posture as AMMUNITION LOADED. If the requirement for action is less immediate, he may lower the posture to AMMUNITION LOCKED or AMMUNITION PREPARED. Additionally, the company commander may designate different weapons safety postures for different elements of the unit. For example, in the attack position, ICVs may switch to AMMUNITION LOADED while infantry squads riding in the ICVs remain at AMMUNITION LOCKED.

	MGS WEAPONS AND AMMUNITION	ICV WEAPONS AND AMMUNITION	INFANTRY SQUAD WEAPONS AND AMMUNITION
AMMUNITION LOADED	Main gun ammunition loaded. Self-defense weapon ammunition on feed tray; bolt locked to rear. Smoke grenades in launchers. Weapons on electrical safe.	Self-defense weapon ammunition on feed tray; bolt locked to rear. Smoke grenades in launchers. Weapons on electrical safe.	M4 rounds chambered. M240B and M249 ammunition on feed tray; bolt locked to rear. M203 launcher loaded. Weapons on safe.
AMMUNITION LOCKED	Main gun ammunition in ready rack. Self-defense weapon ammunition on feed tray; bolt forward. Smoke grenades in launchers. Weapons on electrical safe.	Self-defense weapon ammunition on feed tray; bolt forward. Smoke grenades in launchers. Weapons on electrical safe.	Magazines locked into M4s. M240B and M249 ammunition on feed tray; bolt locked forward. M203 launcher unloaded.
AMMUNITION PREPARED	Main gun ready rack filled. Machine gun ammunition boxes filled. Smoke grenades in launchers.	Self-defense weapon ready boxes filled. Smoke grenades in launchers.	Magazines, ammunition boxes, launcher grenades, and hand grenades prepared but stowed in pouches or vests.
WEAPONS CLEARED	Main gun ready rack filled. Self-defense weapon cleared, with bolts locked to the rear.	Self-defense weapon cleared, with bolts locked to the rear.	Magazines, ammunition boxes, and launcher grenades removed; all weapons cleared.

Table H-2. Weapons safety posture levels.

(9) ***Engagement Techniques.*** Engagement techniques are effects-oriented direct fire distribution measures. The following engagement techniques are the most common in SBCT infantry company operations:

- Point fire.
- Area fire.
- Alternating fire.
- Sequential fire.
- Simultaneous fire.
- Observed fire.
- Time of suppression.
- Reconnaissance by fire.

(a) *Point Fire*. Point fire concentrates the effects of a unit's fire against a specific, identified target such as a vehicle, machine gun bunker, or ATGM position. When leaders direct point fire, all of the unit's weapons engage the target, firing until it is destroyed or

the required time of suppression has expired. Employing converging fires from dispersed positions makes point fire more effective because the unit engages the target from multiple directions. The unit may initiate an engagement using point fire against the most dangerous threat, then revert to area fire against other, less threatening point targets. (Use of point fire has been fairly rare because a unit seldom encounters a single, clearly identified enemy weapon; however, with the increased tactical information gained through FBCB2, this may become a more useful technique.)

(b) *Area Fire*. Area fire involves distributing the effects of a unit's direct fires over an area in which enemy positions are numerous or are not obvious. If the area is large, leaders assign sectors of fire to subordinate elements using a terrain-based distribution method such as the quadrant technique. Typically, the primary purpose of the area fire is suppression; however, sustaining effective suppression requires judicious control of the rate of fire.

(c) *Alternating Fire*. In alternating fire, pairs of elements continuously engage the same point or area target one at a time. For example, a company team may alternate fires of two platoons; a tank platoon may alternate the fires of its sections, or an infantry platoon may alternate the fires of a pair of machine guns. Alternating fire permits the unit to maintain suppression for a longer duration than does simultaneous fire. It also forces the enemy to acquire and engage alternating points of fire.

(d) *Sequential Fire*. In sequential fire, the subordinate elements of a unit engage the same point or area target one after another in an arranged sequence. For example, an MGS platoon may sequence the fires of its four vehicles to gain maximum time of suppression. Sequential fire can also help prevent the waste of ammunition, as when an infantry platoon waits to see the effects of the first Javelin before firing another. Additionally, sequential fire permits elements that have already fired to pass on information they have learned from the engagement. An example would be an infantryman who missed an armored vehicle with AT4 fires passing range and lead information to the next soldier preparing to engage the same armored vehicle with an AT4.

(e) *Simultaneous Fire*. Units employ simultaneous fire, also referred to as volley fire, to rapidly mass the effects of their fires or to gain immediate fire superiority. For example, a unit may initiate a support-by-fire operation with simultaneous fire, then change to alternating or sequential fire to maintain suppression. Simultaneous fire is also employed to negate the low probability of hit and kill of certain antiarmor weapons. As an example, a dismounted infantry squad may employ volley fire with its AT4s to ensure rapid destruction of a BMP that is engaging a friendly position.

(f) *Observed Fire*. Observed fire is normally used when the company is in concealed defensive positions with engagement ranges in excess of 2,500 meters. It can be employed between elements of the company, such as an infantry platoon observing while the MGS platoon fires, or between vehicles of the MGS platoon. The company commander or platoon leader directs one element or vehicle to engage. The remaining elements or vehicles observe fires and prepare to engage on order in case the engaging element consistently misses its targets, experiences a malfunction, or runs low on ammunition. Observed fire allows for mutual observation and assistance while protecting the location of the observing elements.

(g) *Time of Suppression*. Time of suppression is the period, specified by the company commander, during which an enemy position or force is to be suppressed. Suppression time typically depends on the time it will take a supported element to maneuver. Normally, a unit suppresses an enemy position using the sustained rate of fire of its weapons. In planning for sustained suppression, leaders must consider several factors: the estimated time of suppression, the size of the area being suppressed, the type of enemy force to be suppressed, range to the target, rates of fire, and available ammunition quantities.

(h) *Reconnaissance by Fire*. Reconnaissance by fire is the process of engaging possible enemy locations to elicit a tactical response, such as return fire or movement. This response permits the company commander and his subordinate leaders to make accurate target acquisition and then to mass fires against the enemy element. Typically, the company commander directs a platoon to conduct the reconnaissance by fire. For example, he may direct an overwatching platoon to conduct the reconnaissance by fire against a probable enemy position before initiating movement by a bounding element. The company commander should use reconnaissance by fire only if he cannot gain accurate information through FBCB2.

H-16. FIRE COMMANDS

Fire commands are oral orders issued by the SBCT infantry company commander and his subordinate leaders to focus and distribute fires as required to achieve the desired effects against an enemy force. Fire commands allow leaders in the already confusing environment of close combat to articulate their firing instructions rapidly and concisely using a standard format. Unit fire commands include these elements--

- Alert.
- Weapon or ammunition (optional).
- Target description.
- Orientation.
- Range (optional).
- Control (optional).
- Execution.

a. **Alert.** The alert specifies the units that are directed to fire. It does not require the leader who initiates the command to identify himself. Examples of the alert element (call signs and code words based on unit SOP) include the following--

- "GUIDONS" (all subordinate elements).
- "RED" (1st platoon only).

b. **Weapon or Ammunition (Optional).** This element identifies the weapon and ammunition to be employed by the alerted units. Leaders may designate the type and number of rounds to limit expenditure of ammunition. Examples of this element include the following:

- "JAVELIN."
- "TWO ROUNDS HEP-T."

c. **Target Description.** Target description designates which enemy forces are to be engaged. Leaders may use the description to focus fires or achieve distribution. Examples of target description include the following:

- "TROOPS IN TRENCH."
- "BUNKER."
- "THREE PCs (personnel carriers)."

d. **Orientation.** This element identifies the location of the target. There are numerous ways to designate the location of target, including the following:

- Closest TRP. Example: "TRP 13."
- Clock direction. Example: "ONE O'CLOCK."
- Terrain quadrant. Example: "QUADRANT ONE."
- Friendly quadrant. Example: "LEFT FRONT."
- Target array. Example: "FRONT HALF."
- Tracer on target. Example: "ON MY TRACER."
- Laser pointer. Example: "ON MY POINTER."

e. **Range (Optional).** The range element identifies the distance to the target. Announcing range is not necessary for systems that have range finders or that employ command-guided or self-guided munitions. For systems that require manual range settings, leaders have a variety of means for determining range, including the following:

- Predetermined ranges to TRPs or phase lines.
- An MGS crew announcing the range for an infantry platoon.
- Handheld range finders.
- Range stadia.
- Mil reticles.

f. **Control (Optional).** The company commander may use this optional element to direct desired target effects, distribution methods, or engagement techniques. Subordinate leaders may include the control element to supplement the company commander's instructions and achieve effective distribution. Examples of information specified in the control element include the following:

- Target array. Example: "FRONT HALF."
- Fire pattern. Example: "FRONTAL."
- Terrain quadrant. Example: "QUADRANT ONE."
- Engagement priorities. Example: "MGSs ENGAGE BUNKERS; ICVs ENGAGE TROOPS."
- Engagement technique. Example: "ALTERNATING."
- Target effect. Example: "AREA."

g. **Execution.** The execution element specifies when direct fires should be initiated. The company commander may engage immediately, delay initiation, or delegate authority to engage. Examples of this element include the following:

- "FIRE."
- "AT MY COMMAND."
- "AT YOUR COMMAND."
- "AT PHASE LINE ORANGE."